From: Nicole Moutoux
To: Craig Cooper
Cc: Andrew Taylor
Subject: Re: Fw: SSFL Explanation of Radionuclide Tables
Date: 04/15/2009 07:18 PM

Hi there-
I like the "think outside the box" strategy but I think we need to think about "hiring" ACME. That puts them in a different position when they review future work. Also, remember DOE and Boeing are on our team and we need to be sensitive to their concerns since most would label ACME as activists. Also, isn't ACME applying for a TASC grant? I don't want to throw cold water on this concept because I like the idea behind it, but we need make sure we go in thinking it through.
Nicole
Nicole G. Moutoux
Superfund Division
Project Manager
(415)972-3012
moutoux.nicole@epa.gov

-----Craig Cooper/R9/USEPA/US wrote: -----

To: Andrew Taylor/R9/USEPA/US@EPA
From: Craig Cooper/R9/USEPA/US
Date: 04/15/2009 04:35PM
cc: Nicole Moutoux/R9/USEPA/US@EPA
Subject: Re: Fw: SSFL Explanation of Radionuclide Tables

Andrew - I know...I feel the same way....so much info, so little time. However, I am going to have to a "tip of the iceberg" type! William Bowling is the co-founder (with Christina Walsh) of the Aerospace Cancer Museum of Education (ACME) located about 2 miles from the SSFL itself. This great little museum has lots of information that I am sure you will visit more than once. In fact, I am so impressed by their knowledge of the site (and our need for speed), that perhaps HGL could hire them (as subs or as short-term employees) to assist with some of the HSA work. For example, they know the DOE HSA very well already and could prepare memos on "key issues, loose ends, etc". With our concurrence, they could research and follow up on lots of their own ideas.....that will likely end up as comments on our draft HSA. So, I am thinking, why not have them work on this themselves. Plus, they could also "field truth" activity areas onsite or near site since they live and work so close to the site. Both Bill and Christina have endless energy and passion on this issue and it would be a way to channel their energy into constructive support on our work products. Plus, I think it would be a great way to incorporate "community insight and thought" into our HSA. Of course, they would have to agree that HGL would have final editorial rights to HGL work products and there in lies a potential problem.....but these type of disagreements has happened and will continue to happen regardless of their status (as HGL employees or community activists). I have not mentioned this to HGL yet (and I know I cannot direct them who to subcontract to). I just wanted to think "outside the box" a little on this. I know you may not have an opinion on this since you have not met them. I copied Nicole on this email to get her initial opinion of this idea.
Craig

==========
Craig Cooper
Superfund Project Manager
U.S. EPA Region 9
(415) 947-4148 (ph)
(415) 947-3520 (fax)

Andrew Taylor---04/15/2009 02:34:37 PM---wow. thanks craig. I wish I could take a sabbatical to just to soak in all the information out the

From: Andrew Taylor/R9/USEPA/US

To: Craig Cooper/R9/USEPA/US@EPA

Date: 04/15/2009 02:34 PM

Subject: Re: Fw: SSFL Explanation of Radionuclide Tables

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wow. thanks craig. I wish I could take a sabbatical to just to soak in all the information out there on SSFL! Who is william bowling?

-Andrew

****
Andrew Taylor
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U.S. Environmental Protection Agency, Region 9
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EMail: taylor.andrew@epa.gov

Craig Cooper---04/15/2009 02:17:50 PM---Andrew - Please see the email below from one of the co-founders of ACME. The official topic is

From: Craig Cooper/R9/USEPA/US

To: Andrew Taylor/R9/USEPA/US@EPA

Cc: eevans@hgl.com

Date: 04/15/2009 02:17 PM

Subject: Fw: SSFL Explanation of Radionuclide Tables

Andrew - Please see the email below from one of the co-founders of ACME. The official topic is about the list of rads that should be tested for during EPA's upcoming Background Study....but he mentions past HSA work so I am sending it to you for your info.
Craig

==========
Craig Cooper
Superfund Project Manager
U.S. EPA Region 9
(415) 947-4148 (ph)
(415) 947-3520 (fax)
----- Forwarded by Craig Cooper/R9/USEPA/US on 04/15/2009 02:15 PM -----

From: william bowling <williamprestonbowling@yahoo.com>

To: Nicole Moutoux/R9/USEPA/US@EPA, Gregg Dempsey/LV/USEPA/US@EPA, Mary Aycock/R9/USEPA/US@EPA, Christina Walsh <cwalsh@cleanuprocketdyne.org>

Cc: Daniel Hirsch <CBGHirsch@aol.com>, FX-6 Personal Privacy, Carl Palladino <cpalladino@palladinocompany.com>, Craig Cooper/R9/USEPA/US@EPA, dixie.hambrick@mwhglobal.com, djablon1@ch2m.com, Dawn Kowalski FX-6 Personal Privacy Doug Sheeks <DSheeks1@dtsc.ca.gov>, Eric Evans <eevans@hgl.com>, Gerard Abrams <GAbrams@dtsc.ca.gov>, Holly Huff FX-6 Personal Privacy, lsarmiento@dtsc.ca.gov, Marie Mason < FX-6 Personal Privacy >, Philip DRutherford <philip.d.rutherford@boeing.com>, Marie Mason < FX-6 Personal Privacy >, Merrilee Fellows <MFellows@nasa.gov>, Pete Dacyk <pdacyk@hgl.com>, RUCKER PhD <ruckert@saic.com>, Susan Callery <scallery@dtsc.ca.gov>, Stephanie Jennings <stephanie.jennings@em.doe.gov>, Stephanie Jennings <stephanie.jennings@emcbc.doe.gov>, ThomasJohnson <thomas.johnson@emcbc.doe.gov>, John Wondolleck <wondolleckjt@cdm.com>

Date: 04/10/2009 01:09 PM

Subject: Re: SSFL Explanation of Radionuclide Tables

Hello All,

Please find my comments.

First off, HANFORD should NOT be used as a model. The Santa Susana Field Laboratory (SSFL) is a site like no other in the world. During the last 6 months with my new-found knowledge of Geology it has become clear that nothing can compare.

TRITIUM should be big on the list, as it has been found in waterwells in and around the SSFL. The groundwater impacts from the SSFL can be the cause of the Health Problems we have seen in the Surrounding Communities. On a tour with Phil Rutherford of the Boeing Co. of the Building 4024 in AREA IV we saw groundwater penetrating a sealed reactor room. This is a room that is three stories deep and has a 9 foot thick steel door on railroad tracks to seal this unpenatratable room. Yet groundwater found it's way in, WHAT FOUND IT'S WAY OUT? Tritium? We saw the same problem in the D & D and excavation of the Building 59 in AREA IV that housed one of the SNAP reactors, is that in our considerations. The Building 56 excavation was to be another reactor building, said to be a dual reactor to the building 59 reactor, upon excavation, they hit groundwater. So they used it as a dumpsite for Radioactive and Chemical Waste.

After a conversation with Gregg Dempsey of EPA, I feel that I should present these documents…

http://www.acmela.org/images/List of AEC Radioisotope Customers 1964.pdf

http://www.acmela.org/images/List of AEC Radioisotope Customers 1968.pdf

This will help us in the distance testing to know what other Facilities nearby had Products using Radioisotopes.

The Historical Site Assessment (HSA) prepared for the Boeing Company can be found in it's entirety below…

http://www.boeing.com/aboutus/environment/santa susana/hsa.html

As we keep referring to it, some of us have never seen it, enjoy.

From what I understand, per the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) that any prior Historical Site Assessment has to be included in the MARSSIM process.

This HAS states "Evaluations performed for the 272 sites in Area IV determined a total of 95 sites were distinguished as impacted or potentially impacted by radiological materials. Of the 95 impacted or potentially impacted sites, 68 have been previously released by the appropriate agency and require no further action, 27 sites require additional actions."

Knowing what we know now, the entire AREA IV including it's now demolished areas should be looked into.

I feel that the interviews conducted in this HAS could be biased to the DOE or Boeing and if this HAS is used at all it should be used as a loose guide and not as fact as we know more about AREA IV since this document was released. From looking at the current Group 5 RFI Report we have learned that when a contractor states "No Sampling Warranted" is not always the right decision.

Now that the money has been allocated, we need to do this RIGHT, as the next administration may not feel this cleanup to be an issue.

The meltdown that occurred in 1959 is more than just a meltdown.

They did not know the extent of the damage and they Shut Down and Restarted this reactor for two weeks in hopes that it would fix itself. I do this myself when my Harley wont start.

No matter if one believes the estimates of more than 240 times that of Three Mile Island as stated in the SSFL Panel Study, I feel it could be more as per talking to Former Reactor Trainee John Pace and his claims of the cleanup and the recovery of the broken fuel rods were 10 fold the danger of the initial fuel rods melting.

I have nothing more to add as I concur with Ms. Walsh.

William Preston Bowling
Founder/Director

Aerospace Cancer Museum of Education
23350 Lake Manor Drive
Chatsworth, California 91311
http://www.ACMEla.org

Other links of interest on this subject…

http://www.CleanUpRocketdyne.org
http://www.SSFLPanel.org
http://www.RocketdyneArchives.com
http://www.CommitteeToBridgeTheGap.org
http://www.RocketdyneWatch.org
http://www.StopRunkleDyne.com
http://www.The-Aero-Space.com
http://www.EnviroReporter.com
http://www.H2ohno.com
http://www.PSRLA.org

Please Consider the Environment Before Printing this E-mail

--- On Thu, 4/9/09, Christina Walsh <cwalsh@cleanuprocketdyne.org> wrote:

> From: Christina Walsh <cwalsh@cleanuprocketdyne.org>
> Subject: Re: SSFL Explanation of Radionuclide Tables
> To: "Moutoux. Nicole@epamail. epa. gov" <Moutoux.Nicole@epamail.epa.gov>, dempsey.gregg@epa.gov, Aycock.Mary@epamail.epa.gov
> Cc: "Daniel Hirsch" <CBGHirsch@aol.com>, [redacted], "Carl Palladino" <cpalladino@palladinocompany.com>, Co[redacted]a.gov, dixie.hambrick@mwhglobal.com, djablon1@ch2m.com, "Dawn Kowalski" <[redacted], "Doug Sheeks" <DSheeks1@dtsc.ca.gov>, "Eric Evans" <eevans@hgl.com>, "Gerard Abrams" <GAbrams@dtsc.ca.gov>, "Holly Huff" <[redacted], lsarmiento@dtsc.ca.gov, "Marie Mason" <[redacted], "Rutherford, Philip D" <philip.d.rutherford@boeing.com>, "Marie Mason" <[redacted]>, "Merrilee Fellows" <MFellows@nasa.gov>, "Pete Dacyk" <pdacyk@hgl.com>, "RUCKER PhD" <ruckert@saic.com>, "Susan Callery" <scallery@dtsc.ca.gov>, "Stephanie Jennings" <stephanie.jennings@em.doe.gov>, "Stephanie Jennings" <stephanie.jennings@emcbc.doe.gov>, "Johnson, Thomas" <thomas.johnson@emcbc.doe.gov>, "william bowling" <williamprestonbowling@yahoo.com>, "John Wondolleck" <wondolleckjt@cdm.com>
> Date: Thursday, April 9, 2009, 10:46 AM
> Hi all, following are my
> comments:
> Development of an Initial List of
> Radionuclides Potentially Associated with SSFL
> Regarding
> the HSA - Historical Site Assessment - Normally this is
> done first, but in this case it is not, because of the
> timing. The HSA is required and underway but really
> when we reference MARSSIM, we talk about the fact that it is
> normally based on an HSA when in this case, it does not yet
> exist. I think it's important that we define the
> use of MARSSIM as it applies here since the sequence of this
> process is very important and the fact that we are
> proceeding without these earlier steps according to MARSSIM
> being done. The number of samples, and distance in a
> grid for the different "zones" etc. has also been
> modified, so I would very much like to see a clarification
> as to which parts of MARSSIM we are following to the letter,
> and which we are modifying, and perhaps the basis for the
> modification, i.e. since this is NOT at the final
> confirmation stage but rather to be used for the clean-up
> itself.
> Attachment C
> - "Radionuclides Related
> to Historical Operations at
> the Santa Susana Field Laboratory Area
> IV," Thomas L. Rucker,
> SAIC, March
> 2009
> While the
> list provided in the report is certainly useful, I
> don't believe it is appropriate to "reference"
> this report for the background study on the basis that
> the executive summary and the historical background section
> of the site, underplays the role of the partial
> meltdown that occurred in 1959 and diminishes its'
> potential impact by claiming that it was not a
> "meltdown" and that there was no significant
> radiological release at the time, despite the estimates of
> more than 240 times that of 3 Mile Island as stated in the
> SSFL Panel Study data by Dr.'s Morgenstern and Cohen
> including additional scientific estimates by the panel study
> members. By referencing the report here, it
> potentially diminishes the purpose of the background study
> as the purpose is to find radiation that Dr. Rucker's
> report minimizes or claims doesn't exist. I
> believe that this report does not adequately replace the HSA
> and should not be referenced as a replacement for the
> historical site assessment, even on a temporary basis as the
> reference will potentially be used in the future to make
> determinations about what occurred at the site. That
> is the role of the HSA and not this report.
> Below are some more detailed comments about the report

> that further explain my concerns:
>
> In Dr. Rucker's
> report it states that only .0000002% of the remaining
> radioactivity from previous operations based on operations
> having ceased in 1979 even though the burnpits remained
> active through the 90s
> The data describing
> the decladding operations that went on at the HOT LAB
> continued through 1989 so the calculation of
> "operations ceased as of 1979" is incorrect and
> potentially impacts the decay half-life review.
> Another important consideration that stands out in my
> mind as to how long operations went on, are the prior
> decommissioning activities in Area IV, for example, the
> D&D work at the HotLab which took place in 1995.
> Because of the potential releases related to
> unearthing and removal of these materials where decladding
> operations took place may move that line forward quite a bit
> fro 1988.It is noted that in
> the "Explanation of Selection of Proposed Radionuclides
> for Consideration, the year 1988 is referenced.
>
> The Van de Graaff
> Accelerator is described as having been removed "before
> the SRE was decontaminated" is unclear as the records
> are very spotty with regard to this particle accelerator
> process.
>
> The continued
> storage of remaining radioactive waste continues today and
> it is not clear as to the source, reason for storage, or
> quantity and type of isotopes stored. There were many
> "storage" areas used throughout the site to hold
> radwaste as it decayed. Some was removed in just the
> last few years, and that should be noted and understood
> here. There were two Van der Graaff Accelerators
> when only one is acknowledged despite discussion of the
> second accelerator exists in the "factual
> perspective" I appreciate Dr. Ruckers
> acknowledgement of both, but understanding the details of
> the use of both of these might be helpful in defining
> activation products remaining at the site.
>
> The report
> inadequately describes the fuel-reprocessing operations at
> the "Hot Lab" as a minor operation when in fact
> they received spent fuel from all across the
> country.
>
> In addition, to
> characterize and focus attention on the
> "smallness" of the operation is inappropriate as
> this was a research test lab, so while the processes may not
> have been on large-production-scale, it was done on a
> research basis were mis-haps and fuel handling accidents
> consistent with pushing the scientific envelope at the site.
> This resulted in releases that are not documented
> here, but nevertheless did occur. The release of
> radioactivity is not only that of the "heat
> generated" but that of the operational activities that
> contaminated the work areas. The entire office area of
> the SRE was contaminated and had to be removed and placed
> outside, to decay.
> The statements in
> the Rucker report related to the SRE July 1959 partial
> meltdown indicates that all released radioactivity was
> contained in the primary sodium cooling system.
> EPA's Gregg Dempsey discussed these events at
> length with Mr. Pace and I feel that those accounts must be
> considered here.
> To fail to
> acknowledge these events as recounted by Mr. Pace when
> putting this "story"in the record books would be a
> dis-service, not only to the workers who were exposed at the
> time, but also, potentially change the radionuclides we
> should be looking for.
> The secondary purpose of
> having laboratories provide detection limit and
> analysis cost
> information.Please
> clarify if the list of laboratories that will be eligible to
> bid on this project will be limited to those laboratories
> that are providing the cost and detection limit
> analysis.
> Hanford list:
> Concerns with the use of the
> Hanford table are based primarily with the differences
> between the operations at Hanford vs. SSFL in the
> effluent to the river, the geology is unique and requires a
> deeper understanding as to how these facility impacts would
> be different based on plutonium fabrication,
>
> In
> using 20 half-lives, how many more radionuclides would be
> added back in? My understanding was that it was
> relatively few, but in this case, we should err on the side
> of caution and not risk excluding an important isotope from
> the study.
> Criterion 2 - we
> appreciate the change to this criterion that a radionuclide

> that is a gas but has a parent that passes all selection
> criteria remains on the list.
> Criterion 3 - noted
> exception listed to include with a half-life of less than
> one year when it's parent, has a half-life of greater
> than one year could still be producing the daughter, e.g.
> Actinium -228, Silver -108
>
> Criterion 5 removes
> three of the radionuclides that were added from criterion 4
> in Neodymium-144, Plutonium-244, samarium-148 and radon-225
> which I thought as a daughter product of radium, should be
> included?
>
> Table 1
> - Proposed for
> Consideration:Point 5 of the
> minutes state that three radionuclides had been added to the
> list for an unknown purpose and these are specifically
> Ba-133, K-40, and Na-22 which I specifically commented that
> they were products used at the site, and should not be
> considered on the list for "an unknown purpose"
> None of my comments appear anywhere in any of the
> meeting minutes, so it is difficult to feel confident that
> they are addressed.
> Holmium was to be re-added back in to Table
> II?
> IV Radionuclides for the Distance
> Test Locations
> Concerned about the statement of the considerations being
> measured here and the statistical arguments to be used for
> this purpose. "to determine of the Radiological
> Background Reference Areas have been impacted by releases
> from SSFL" and feel that defining that in further
> detail is important as we have discussed the
> "purpose" of this part of the background study at
> each of the technical meetings and each time, we have found
> a discrepancy in how we are viewing this purpose, and feel
> clarification is needed.
>
> I believe the real question is "are the reference
> areas far enough away that they are free from impacts from
> the SSFL. By looking at specific radio-isotopes on a
> limited basis, and comparing concentrations between those
> found at the "Distance Test Locations" vs. those
> found at the "Background Reference Areas"
> In order to properly make this determination, we need to
> understand what kind of variance in concentrations would be
> considered "in kind" vs. a difference in
> concentrations that would be considered "significant
> enough that the background reference areas might be too
> close and may have received impacts. We are pleased
> that a statistician is being added to the project team, and
> look forward to hearing more on how we can make sure we have
> enough samples to make a meaningful determination.
>
>
> Point 10 states that data interpretation required a skilled
> gamma spectroscopy expert with site process knowledge and I
> specifically asked who would be "identified as
> such" for this purpose - Gregg? I think it is
> important to identify by name who is defined as expert in
> this area, for this purpose to that conflicts in our
> understanding can be resolved.
> John Pace and his recollection
> of fuel handling accidents, cover-gas releases, burning of
> primary sodium, and the wind direction and the several
> purposeful venting releases as they tried over the course of
> several shifts, to un-stick the fuel rods and the fact that
> all the records were contaminated in the process.
> These are important events that paint a very different
> picture than the "releases were contained"
> statements in the Rucker Report and should therefore also be
> included for consideration.
>
> I disagree
> with the notion that including "Sb-125+D should mean
> that we remove tellurium because there are other ways these
> radionuclides can be generated/created including activation
> and fission processes. Same is true for Yttrium as
> referenced as a daughter product of Strontium 90, and Barium
> as referenced as a daughter product of Cesium 137
> Since Holmium was used in some of the control rods, can we
> please look at the other radioisotopes used for control rods
> for the may reactor configurations that were tested at the
> site? It goes well beyond the 10 nuclear reactor
> facilities as more than 27 different reactor configuration
> were studied and tested at Building 9. We are seeing
> higher levels of Sodium and Barium in other "drainage
> effluent" areas outside of Area IV - specifically Area
> III STL IV area which receives drainage from the 17th Street
> area.
> Table
> 2 comments by Boeing discuss
> using Cesium as the dominant gamma emitting risk driver is
> confusing. I take it to state that we are using the
> same count-time for all gamma emitters and I thought they
> would each have to be unique and that was part of the
> purpose of doing the count-time/cost analysis with the labs.
> Strontium count-time would be very long or have we
> decided in the eichrom technique for analysis of Strontium

> 90 ? I think it should
> be listed under both
> processes.
> Thanks for your
> time, and sorry for the delay.   I am on vacation in
> Hawaii and had some technical difficulties over the last few
> days and appreciate my comments being
> considered.Thanks and
> Mahalo,Christina
>
>
>   From: Moutoux.Nicole@epamail.epa.gov [mailto:Moutoux.Nicole@epamail.epa.gov]
>
> Sent: Tuesday, March 31, 2009 7:26 AM
> To: Moutoux.Nic
> Daniel Hirsch; FX-6 Personal Privacy ;
> cpalladino@palladinocompany.com;
> Cooper.Craig@epamail.epa.gov;
> Christina Walsh; dixie.hambrick@mwhglobal.com;
> djablon1@ch2m.com;
> Dawn Kowalski; Doug Sheeks; Eric Evans; Gerard Abrams; Holly
> Huff; lsarmiento@dtsc.ca.gov;
> Marie Mason; Marie Mason; Aycock.Mary@epamail.epa.gov;
> Merrilee Fellows; pdacyk@hgl.com;
> Rutherford, Philip D; ruckert@saic.com;
> Susan Callery; Jennings, Stephanie; Jennings, Stephanie;
> Johnson, Thomas; William Bowling; wondolleckjt@cdm.com;
> dempsey.gregg@epa.gov
> Subject: SSFL Explanation of Radionuclide Tables
>
>
> Hello all-   Attached several documents
> (in one pdf) regarding the radionuclide tables and
> explanations. Note that it is very long and you will
> only want to print out some of the materials. The
> information is provided in its entirety because of the
> questions that were raised at the March 23 smaller group
> meeting, many of which require the references that are
> provided in this attachment.
>   The attachment is organized in the following
> way: 1. Explanation of
> the radionuclide tables 2. Appendix
> A: Information from the Hanford Site
> 3. Appendix B: Table of Best Available
> Detection Limits 4. Appendix C:
> Paper by Tom Rucker regarding Radionuclide use at SSFL
> 5. Appendix D: Meeting Minutes from March
> 23 6. Appendix E: Draft Radionuclide
> Tables 7. Appendix F: EPA's
> Agriculltural Preliminary Remediation Goals
> At the March 23 meeting, the group discussed and agreed
> that once EPA sends the revised tables, they would review
> and send any comments in a week. Please review the
> tables and send me comments by Wednesday, April 8.
>   Thanks very much.
> Nicole   Nicole G. Moutoux
> Superfund Division
> Project Manager
> (415)972-3012
> moutoux.nicole@epa.gov
>
>
>
> <Boeing Comments on EPA's
> ROCs dated 2009-03-31.pdf>
>